START
United States Environmental Protection Agency
Region 10
Hanford Project Office
712 Swift Boulevard, Suite 5
Richland WA 99352
EPA

0027041

WHC INCOMING: 9301661

February 24, 1993

Steven H. Wisness
Tri-Party Agreement Manager
U.S. Department of Energy
P.O. Box 550, A5-15
Richland, WA 99352

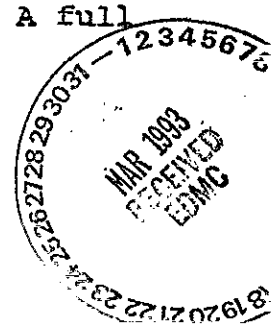
Re: Construction of the Hanford Prototype Barrier at the 200-BP-1 Operable Unit.

Dear Mr. Wisness:

The Environmental Protection Agency (EPA) first proposed moving the construction site for the Hanford Prototype Barrier from the Meteorological Station (an uncontaminated area) to the 200-BP-1 Operable Unit (OU) in September, 1992. Shortly thereafter, all three parties agreed that the prototype barrier would be installed over the B-57 crib and a change control form was signed on December 3, 1992.

Construction of the prototype barrier will begin prior to the final Record of Decision (ROD) for the 200-BP-1 OU. We were faced with the issue of how to document our decision to proceed with this action under the framework of Superfund. We considered the options of an expedited response action, an interim record of decision, and a treatability test. EPA's September 9, 1992 letter proposed constructing the Hanford Prototype Barrier as a treatability test over the B-57 crib at the 200-BP-1 OU. During the negotiation process, EPA decided to include an opportunity for public comment on the treatability test plan in order to alleviate the possibility of public concerns, as this treatability test may serve as the final remediation of a waste site in the 200-BP-1 OU.

The parties have fundamentally agreed to the approach of the treatability test. It will consist of a two phased approach, with the first phase containing two distinct elements. The first element of phase one will provide us valuable information on the implementability of the Hanford barrier on a large scale. A full



scale barrier of this type has not yet been constructed. Based on data obtained in the Remedial Investigation/Feasibility Study at the 200-BP-1 OU, we are anticipating that a barrier system will be proposed as the preferred remedial action at the remaining cribs in the 200-BP-1 OU. This treatability test will provide the opportunity to obtain "lessons learned" for any future barrier installation projects, including the remainder of the 200-BP-1 OU. In this instance, phase one of the test would begin prior to issuance of the final 200-BP-1 ROD (ROD issuance is anticipated for December 31, 1993), but would not be completed until shortly after ROD issuance. However, phase one would be completed prior to construction or remediation activities required by the ROD. This would allow any necessary barrier design changes to occur prior to full scale remediation of the 200-BP-1 OU in the 1994 construction season.

The second element of phase one will consist of demonstrating that the Hanford barrier is equivalent or superior to the Resource Conservation Recovery Act (RCRA) cap. In this case, the equivalency demonstration will be made for the asphaltic concrete liner, a significant component of the barrier, as it is the low permeability layer. RCRA equivalency must be proven for barrier performance before the Remedial Design Report for final remediation of the 200-BP-1 OU is submitted to the regulators. The RCRA equivalency demonstration, including in-situ testing, will be performed once the asphaltic concrete layer is laid down for the prototype barrier. Remaining work on the prototype barrier will be suspended until the RCRA equivalency demonstration is complete. Once the demonstration is complete, final work on the barrier will commence. DOE would shortly thereafter issue a Treatability Test Report that would address the results of both elements of phase one of the Treatability Test.

Staff from DOE, WHC, and PNL have expressed concerns on EPA's requirements pertaining to RCRA equivalency. These requirements are contained in the RCRA regulations of 40 CFR § 264.310. Further guidance is contained in an EPA Seminar Publication, titled "Requirements for Hazardous Waste Landfill Design, Construction, and Closure", EPA/625/4-89-/022, dated August 1989.

The second phase of the treatability test will consist of three years of testing the barrier as specified in the Hanford Prototype Barrier Test Plan. These detailed tests will evaluate performance of the barrier as a system. Extreme testing conditions will be used to simulate worst case scenarios. The information gained through phase two of the test will provide data for improvement of barrier design for future remediation projects.

The Hanford Prototype Barrier Test Plan, as currently exists, will serve as the main body of the treatability test plan. This plan will need to be supplemented with additional details describing the information to be gathered under the above mentioned phase one. In order to meet our current schedules, this plan must be completed as soon as possible. Staff from EPA, Washington State Department of Ecology (Ecology), DOE, Westinghouse Hanford Company (WHC), and Kaiser Engineers Hanford (KEH) have met to decide on the criteria and guidelines for phase one of the treatability test. During a February 3, 1993 meeting, KEH staff informed the three parties and WHC staff that they were addressing the second element of phase one of the test. This information, along with the section pertaining to the RCRA equivalency demonstration should be sufficient to complete the treatability test plan.

As stated above, the Prototype Barrier may ultimately fulfill the requirements of final remediation at the B-57 crib. Therefore, EPA has chosen to provide a public comment period of 30-days with a contingency for a 30-day extension (if requested) for the treatability test plan. Subcontractor work on the barrier should not begin until the public comment period is completed and any necessary design modifications are made. Consequently, the treatability test plan must be submitted to EPA and Ecology and must be available for public comment by June 1, 1993, in order to meet our schedule. This schedule, which is enclosed, provides for a 60-day DOE-RL, DOE-HQ review and incorporation of comments. It would be helpful to all parties if DOE could accelerate its review time. The schedule also provides for public comment concurrent with EPA and Ecology review. The public comment period will end July 1 (or August 1 if an extension is requested).

The schedule for completion of the treatability test (phase one) is aggressive, but achievable. We believe the enclosed schedule allows sufficient time to accomplish all the necessary tasks.

If you have any questions, please call me at (509) 376-6623 or Paul Beaver of my staff at (509) 376-8665.

Sincerely,

Paul T. Day
Hanford Project Manager

Enclosure (proposed schedule)

cc: Roger Freeberg/Julie Erickson, DOE
Allen Harris, DOE
[redacted] WHC
Mark Buckmaster, WHC
Dave Jansen, Ecology
Darci Teel/Nancy Uziemblo, Ecology
George Hofer, EPA
Administrative Record, 200-BP-1 operable unit
Audree DeAngeles, PRC
Ward Staubitz, USGS
Cathy Massimino, EPA
Andy Boyd, EPA

ENCLOSURE

Proposed Schedule for Conducting the Treatability Test of the Hanford Prototype Barrier

3/31/93	The draft Hanford Prototype Barrier Test Plan (to serve as the treatability test plan) is submitted to DOE-RL and DOE-HQ for review. This includes the testing requirements for RCRA equivalency demonstration for the asphaltic concrete layer and the data requirements for constructability information. It should be noted that the schedule contained in the December 3, 1992 change package indicates a December 31, 1992 submittal date for the conceptual design. The three parties agreed not to submit a final conceptual design and move forward with the submittal of the definitive design scheduled for March 31, 1993. Although the schedule does not specify the submittal date of the Treatability Test Plan for the prototype barrier, it was tentatively agreed that the plan could be submitted to the regulators by March 31, 1993.
6/1/93-7/1/93	DOE submits the Treatability Test Plan to EPA and Ecology for regulatory agency review. Concurrently, the Treatability Test Plan is issued for a 30-day public comment period.
7/1/93	EPA submits initial comments to DOE.
7/1/93-8/1/93	Contingency for request for an extension of public comment period (another 30-days) and DOE incorporates EPA's initial comments.
8/1/93-8/15/93	Public comments transmitted from EPA to DOE, along with any final comments from EPA. Three party discussions and design modifications for prototype barrier, as necessary, based on all comments. DOE modifies the Treatability Test Plan, as necessary, and resubmits to EPA and Ecology.
8/31/93	EPA approves Treatability Test Plan.
9/15/93	Site preparation work is initiated by KEH/WHC (i.e., base fill layer, extend water line...etc.).

10/1/93	Construction by subcontractor of prototype barrier begins at B-57 crib.
10/10/93	Construction of asphaltic concrete liner begins.
11/1/93-2/1/94	RCRA equivalency demonstration of asphaltic concrete liner is performed.
2/1/94-4/1/94	Complete construction of prototype barrier and initiate phase two of the Treatability Test.
5/15/94	DOE submits the Treatability Test Report for phase one of the Treatability Test. [Note: The current Tri-Party Agreement schedule requires DOE to submit this information by 1/15/94. A change request may be required to reflect the schedule proposed in this letter].
5/1/97	DOE submits the Treatability Test Report for phase two of the Treatability Test. [Note: If significant information becomes available during phase two testing, an early or interim report(s) may be necessary to support decisions on design or construction of barrier systems].

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Author	Addressee	Correspondence No.
P. T. Day, EPA	S. H. Wisness, RL	Incoming: 9301661

Subject: CONSTRUCTION OF THE HANFORD PROTOTYPE BARRIER AT THE 200-BP-1 OPERABLE UNIT

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